

# SHOCKPROOF MICROPHONE SUPPORT DEVICE

## BACKGROUND OF THE INVENTION

### 1. Field of the Invention

The present invention is related to a microphone support device, and more particularly to a microphone support device that is able to absorb vibration so as to avoid the undesirable noise generated by shock to the microphone.

### 2. Description of Related Art

A public-address system is especially useful in a public place, wherein the microphone is generally and widely applied in a concert or when delivering a speech.

With reference to Fig. 5, a conventional microphone support device mainly comprises a retaining base (60) and a casing pipe (62) for receiving a microphone. The retaining base (60) is defined with a thread hole therein (not shown) to receive one end of a support rod (not shown), and a crest portion defined with an aperture (61) is formed on a top of the retaining base (60). Two ears (63) are perpendicularly formed on the outer periphery of the casing pipe (62) and apart from each other so as to define a gap, wherein each ear (63) is defined with a hole (64) therein. When assembling the casing pipe (62) and the retaining base (60) together, the two ears (63) are respectively straddled on two sides of the crest portion of the retaining base (60), and the two holes (63) are in alignment with the aperture (61). Thus a screw (65) is able to sequentially insert into the holes (64) and the aperture (61) and then be received in a screw receiver (66).

When the foregoing support device is assembled with a microphone, if the

1 support rod incurs a vibration or shock, such a vibration will pass to the  
2 microphone through the retaining base (60) and the casing pipe (62), whereby  
3 the undesirable noises are generated by the microphone.

4 Therefore, the invention provides a shockproof microphone support device  
5 to mitigate and/or obviate the aforementioned problems.

#### 6 SUMMARY OF THE INVENTION

7 The main objective of the invention is to provide a shockproof microphone  
8 support device that is able to absorb vibration so as to avoid the generation of  
9 the undesirable noises.

10 Other objects, advantages and novel features of the invention will become  
11 more apparent from the following detailed description when taken in  
12 conjunction with the accompanying drawings.

#### 13 BRIEF DESCRIPTION OF THE DRAWINGS

14 Fig. 1 is an exploded perspective view of a microphone support device in  
15 accordance with the present invention;

16 Fig. 2 is a plan view showing a shockproof strip in accordance with the  
17 invention;

18 Fig. 3 is an assembled perspective view of the microphone support device  
19 shown in Fig. 1;

20 Fig. 4 is a perspective view showing the microphone support device is  
21 assembled with a microphone; and

22 Fig. 5 is an exploded perspective view of a conventional microphone  
23 support device.

#### 24 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

1 With regard to Fig. 1, a shockproof microphone support device in  
2 accordance with the present invention mainly comprises a retaining base (10), a  
3 first grip plate (30), a second grip plate (30a), a shockproof strip (40) and a  
4 holder (50).

5 The retaining base (10) is formed as a substantially tapered shape and has a  
6 threaded hole (not shown) defined in a bottom thereof. A slot (11) is  
7 downwardly and vertically defined in a top of the retaining base (10), and two  
8 holes (12) are respectively provided in two opposed side walls defining the slot  
9 (11), whereby each hole (12) communicates with the slot (11).

10 A supporting base made of the first grip plate (30) and the second grip plate  
11 (30a) is secured in the retaining base (10), wherein the structure of the first grip  
12 plate (30) and the second grip plate (30a) are substantially the same and  
13 symmetrical.

14 The first grip plate (30) has a U-like cross-section channel (38) defined by a  
15 top lateral portion (31), a bottom lateral portion (32), an upright portion (not  
16 numbered) extending between the top lateral portion (31) and the bottom lateral  
17 portion (32), and an ear plate (34) integrally and downwardly extending from a  
18 flange of the bottom lateral portion (32). The ear plate (34) further defines an  
19 aperture (35) in its central portion. A plurality of pin holes (37) are respectively  
20 and uniformly defined at the flanges of the top lateral portion (31) and bottom  
21 lateral portion (32). A plurality blocks (33) is formed on a sidewall of the  
22 upright part.

23 Most of the structure of the second grip plate (30a) is substantially the same  
24 as that of the first grip plate (30), wherein the only change is that the plurality of

1 pin holes (37) is replaced with a plurality of pins (36) that corresponds to the  
2 plurality of pin holes (37).

3 With reference to Fig. 2, the shockproof strip (40) has two long edges. Two  
4 notches (41) are respectively defined in opposed ends of each long edge. A  
5 plurality of unpenetrated dents (42) are uniformly provided on the shockproof  
6 strip (40), and the material of the shockproof strip (40) is chosen as an elastic  
7 material, such as rubber.

8 With regard to Fig. 1, the holder (50) has a bottom (not numbered), and two  
9 arcuate portions uprightly and integrally extending from opposed sides of the  
10 bottom and toward each other, so that a hollow (51) is defined by the two  
11 arcuate portions for receiving a microphone. A through channel (53) is further  
12 lengthwise defined in the bottom of the holder (50).

13 With reference to Figs. 1 and 3, the operation to assemble the foregoing  
14 elements of the present invention is as following. First of all, the shockproof  
15 strip (40) is inserted into the channel (52) of the holder (50) and bent downward  
16 to form an elliptical ring. Because the plurality of the dents (42) is provided on  
17 the shockproof strip (40), the shockproof strip (40) is easily deformed and bent.  
18 Then, the first grip plate (30) and the second grip plate (30a) are provided on  
19 opposite sides of the shockproof strip (40) so that the first and second grip plates  
20 (30,30a) are able to engage with the shockproof strip (40). The two sides of the  
21 shockproof strip (40) are respectively received in the U-like cross-section  
22 channels (38, 38a) of the first grip plate (30) and the second grip plate (30a), and  
23 the blocks (33) of the first grip plate (30) and the second grip plate (30a) are  
24 received in the notches (41) of the shockproof strip (40). The plurality of pins

1 (36) of the second grip plate (30a) are correspondingly received in the plurality  
2 of the pin holes (37). Furthermore, the ear plates (34, 34a) are in alignment with  
3 each other and collectively received in the notch (11), wherein the apertures (35,  
4 35a) are also in alignment with the two holes (12) of the retaining base (10),  
5 whereby a screw (20) is able to insert into the two holes (12) and the apertures  
6 (35, 35a) and is received in a screw receiver (21), thus the first and second grip  
7 plates (30, 30a) are securely retained in the retaining base (10).

8 With regard to Fig. 4, the retaining base (10) is screwed on one end of a  
9 support rod (100), and a microphone is received in the hollow (51) of the holder  
10 (50). If the support rod receives vibration or shock, the vibration is passed  
11 through the retaining base (10), the first and second grip plate (30,30a) to the  
12 shockproof strip (40). Since the material of the shockproof strip (40) is elastic  
13 material, the vibration is absorbed by the shockproof strip (40), thus the  
14 potential undesirable noises via the microphone are avoided.

15 It is to be understood, however, that even though numerous characteristics  
16 and advantages of the present invention have been set forth in the foregoing  
17 description, together with details of the structure and function of the invention,  
18 the disclosure is illustrative only, and changes may be made in detail, especially  
19 in matters of shape, size, and arrangement of parts within the principles of the  
20 invention to the full extent indicated by the broad general meaning of the terms  
21 in which the appended claims are expressed.